

Sub E1
transmitting the print data converted by said converting step to the image output apparatus through the logical interface corresponding to the assigned image output apparatus constructed by said constructing step.

REMARKS

This application has been carefully reviewed in light of the Office Action dated June 27, 2002. Claims 36 to 47 are now in the application, with Claims 1, 4 to 6, 8 to 16, 19 to 21, and 23 to 35 having been canceled. Claims 36, 40 and 44 are the independent claims herein. Reconsideration and further examination are respectfully requested.

Claims 1, 4 to 6, 8 to 16, 19 to 21 and 23 to 35 were rejected under 35 U.S.C. § 103(a). More particularly, Claims 1, 4, 5, 8, 12 to 16, 19, 20, 23 and 27 to 35 were rejected over U.S. Patent No. 5,287,194 (Lobiondo) in view of U.S. Patent No. 5,754,744 (Matsumoto), Claims 6 and 21 were rejected over Lobiondo in view of Matsumoto and further in view of U.S. Patent No. 6,088,120 (Shibusawa), Claims 9 and 24 were rejected over Lobiondo in view of Matsumoto and further in view of U.S. Patent No. 5,859,711 (Barry), and Claims 10, 11, 25 and 26 were rejected over Lobiondo in view of Matsumoto and further in view of U.S. Patent No. 5,467,434 (Hower). Without conceding the propriety of the rejections, all of the rejected claims have been cancelled. However, new Claims 36 to 47 have been added to merely to provide even further clarity of the subject matter of the present invention. Accordingly, although the rejected claims have been cancelled, this amendment is to be viewed as a traversal of the rejections. As such, the Examiner is respectfully requested to reconsider and withdraw the rejections after carefully considering the following points.

The present invention concerns selecting an image output apparatus from among a plurality of image output apparatuses so that a print job can be transmitted directly to one of the apparatuses from a computer workstation, without the need for a print server. According to the invention, selection conditions, which are associated with printing and capable of being designated by an operator, are limited within a range such that at least one of the plurality of image output apparatuses satisfies a selection condition to be designated by the operator. A display device displays the limited selection conditions such that the operator can designate a desired selection condition. Then, a plurality of logical interfaces, for transmitting the print data directly to one of the plurality of image output apparatuses, are constructed within the workstation, where each of the plurality of logical interfaces respectively corresponds to the plurality of image output apparatuses. Finally, the generated print data is assigned to one of the plurality of image output apparatuses that is selected based on a selection condition designated by the operator and information which is stored in advance and which indicates print functions of the plurality of image output apparatuses.

As a result of the foregoing, when an operation to print a print job is selected in an application program, a print driver can perform the processes to assign the print job to one of a plurality of printers, and can transmit the print job directly to a selected one of the printers, without the need for a print server. That is, since the logical interfaces are constructed in the workstation, the print job can be transmitted directly, via the logical interface, to any one of a plurality of printers, without first having to submit the print job to a print server.

With specific reference to the claims, newly-added Claim 36 is a data processing apparatus having a printer driver for generating print data in accordance with a print request issued by an application program and assigning the generated print data to one of a plurality of image output apparatuses. The data processing apparatus has a limiting means for limiting selection conditions, which are associated with printing and capable of being designated by an operator, within a range such that at least one of the plurality of image output apparatuses satisfies a selection condition to be designated by the operator. A control means controls a display device to display the selection conditions limited by the limiting means in a form such that the operator can designate a desired selection condition. A constructing means constructs, within the data processing apparatus, a plurality of logical interfaces, for transmitting the print data directly to one of the plurality of image output apparatuses, where each of the plurality of logical interfaces respectively corresponds to the plurality of image output apparatuses. The generated print data is then assigned to one of the plurality of image output apparatuses that is selected based on a selection condition designated by the operator and information which is stored in advance and which indicates print functions of the plurality of image output apparatuses.

Newly-added independent Claims 40 and 44 are method and memory medium claims, respectively, that substantially correspond to Claim 36.

The applied art, alone or in any permissible combination, is not seen to disclose or to suggest the features of Claims 36, 40 and 44. More particularly, the applied art is not seen to disclose or to suggest at least the feature of an apparatus having a printer driver for generating print data in accordance with a print request issued by an application program and assigning the generated print data to one of a plurality of image output

apparatuses, wherein the apparatus limits selection conditions, which are associated with printing and capable of being designated by an operator, within a range such that at least one of the plurality of image output apparatuses satisfies a selection condition to be designated by the operator, and controls a display device to display the limited selection conditions in a form such that the operator can designate a desired selection condition. Moreover, the applied art is not seen to disclose or to suggest at least the feature of an apparatus having a printer driver for generating print data in accordance with a print request issued by an application program and assigning the generated print data to one of a plurality of image output apparatuses, wherein the apparatus constructs, within the apparatus, a plurality of logical interfaces, for transmitting the print data directly to one of the plurality of image output apparatuses, where each of the plurality of logical interfaces respectively corresponds to the plurality of image output apparatuses.

Lobiondo is merely seen to disclose that, when a user submits a print job to a network, a print server performs steps to allocate the job to one of a plurality of printers. If one of the plurality of printers cannot complete the job within a requested completion time, the job is processed by multiple printers with each printer processing a portion of the job. Lobiondo is not seen however, to disclose or to suggest at least the feature of limiting selection conditions and displaying the selection conditions for an operator to designate one of a plurality of printers. Moreover, Lobiondo is not seen to disclose or to suggest the apparatus constructs, within the apparatus, a plurality of logical interfaces, for transmitting the print data directly to one of the plurality of image output apparatuses, where each of the plurality of logical interfaces respectively corresponds to the plurality of image output apparatuses.

Matsumoto is seen to disclose a printing control apparatus that control when a print job is printed out based on a print start time and a print end time. When both are within a print time zone, the job is processed, otherwise, printing is prohibited. However, Matsumoto is not seen to disclose or to suggest at least the feature of an apparatus having a printer driver for generating print data in accordance with a print request issued by an application program and assigning the generated print data to one of a plurality of image output apparatuses, wherein the apparatus limits selection conditions, which are associated with printing and capable of being designated by an operator, within a range such that at least one of the plurality of image output apparatuses satisfies a selection condition to be designated by the operator, and controls a display device to display the limited selection conditions in a form such that the operator can designate a desired selection condition. Moreover, the applied art is not seen to disclose or to suggest at least the feature of an apparatus having a printer driver for generating print data in accordance with a print request issued by an application program and assigning the generated print data to one of a plurality of image output apparatuses, wherein the apparatus constructs, within the apparatus, a plurality of logical interfaces, for transmitting the print data directly to one of the plurality of image output apparatuses, where each of the plurality of logical interfaces respectively corresponds to the plurality of image output apparatuses.

Shibusawa is seen to disclose a printer managing apparatus 1 connected to a plurality of physical printers (2a, 2b, ...) as objects forming a logical printer, and a plurality of clients (4a, 4b, ...) through a network. In the printer managing apparatus 1, logical-printer attribute-information generating means 1d generates the attribute information of the logical printer by summing or multiplying sets of attribute information of the physical

printers. The attribute of the logical printer may include the attribute of at least one of the physical printer. However, in Shibusawa's system, the logical-printer attribute-information generating means 1d is provided in the printer managing apparatus 1, which acts as a print server. The clients (4a, 4b, ...) of Shibusawa can only transmit print data to the printer managing apparatus 1 and cannot transmit the print data directly to the physical printers. As such, if there is trouble in the printer managing apparatus, the clients cannot obtain the attribute information of the logical printer and cannot use any of the physical printers.

In contrast, the present invention constructs the logical interfaces for each of the plurality of image forming apparatuses in the computer itself and therefore, can transmit the print data directly to a selected one of the plurality of image forming apparatuses. Thus, Shibusawa is not seen to disclose or to suggest at least the feature of an apparatus having a printer driver for generating print data in accordance with a print request issued by an application program and assigning the generated print data to one of a plurality of image output apparatuses, wherein the apparatus constructs, within the apparatus, a plurality of logical interfaces, for transmitting the print data directly to one of the plurality of image output apparatuses, where each of the plurality of logical interfaces respectively corresponds to the plurality of image output apparatuses.

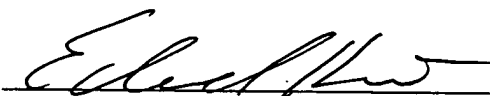
Barry and Hower have been studied but are not seen to add anything to overcome the foregoing deficiencies of Lobiondo, Matsumoto and Shibusawa. More particularly, Barry and Hower are not seen to disclose or to suggest at least the features of an apparatus having a printer driver for generating print data in accordance with a print request issued by an application program and assigning the generated print data to one of a plurality of image output apparatuses, wherein the apparatus limits selection conditions,

which are associated with printing and capable of being designated by an operator, within a range such that at least one of the plurality of image output apparatuses satisfies a selection condition to be designated by the operator, and controls a display device to display the limited selection conditions in a form such that the operator can designate a desired selection condition, or an apparatus having a printer driver for generating print data in accordance with a print request issued by an application program and assigning the generated print data to one of a plurality of image output apparatuses, wherein the apparatus constructs, within the apparatus, a plurality of logical interfaces, for transmitting the print data directly to one of the plurality of image output apparatuses, where each of the plurality of logical interfaces respectively corresponds to the plurality of image output apparatuses.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

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